

**BOBBY JINDAL**  
GOVERNOR



**PEGGY M. HATCH**  
SECRETARY

**State of Louisiana**  
**DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**ENVIRONMENTAL SERVICES**  
February 19, 2010

CERTIFIED MAIL# 7009 2820 0001 8249 7001  
RETURN RECEIPT REQUESTED

FILE NUMBER: LA0039802  
AI NUMBER: 19813  
ACTIVITY NUMBER: PER20090001

Town of Delhi  
Delhi Municipal Sewage Treatment Plant  
P.O. Box 277  
Delhi, LA 71232

Attention: J. Lynn Lewis, Mayor

Subject: Draft Louisiana Pollutant Discharge Elimination System (LPDES) permit to discharge treated sanitary wastewater into Bayou Macon from a publicly owned treatment works serving the Town of Delhi.

Dear Mayor Lewis:

The Department of Environmental Quality proposes to revoke and reissue an LPDES permit with the effluent limitations, monitoring requirements, and special conditions listed in the attached DRAFT PERMIT. Please note that this is a DRAFT PERMIT only and as such does not grant any authorization to discharge. Authorization to discharge in accordance with this permitting action will only be granted after all requirements described herein are satisfied and by the subsequent issuance of a FINAL PERMIT. Upon issuance, the LPDES permit shall replace the previously issued LPDES permit.

This Office will publish a public notice one time in the local newspaper of general circulation, and in the Department of Environmental Quality Public Notice Mailing List. A copy of the public notice containing the specific requirements for commenting to this draft permit action will be sent under separate cover at the time the public notice is arranged. In accordance with LAC 33:IX.6521.A, the applicant shall receive and is responsible for paying the invoice(s) from the newspaper(s). LAC 33:IX.6521 states, "...The costs of publication shall be borne by the applicant."

The invoice, fee rating worksheet, and a copy of the fee regulations will be sent under a separate cover letter as applicable. Please note that a copy of the fee rating worksheet is also attached to this draft permit. We must receive your fee payment by check, money order, or draft accompanied by the original and a copy of your invoice. A copy of the entire Louisiana Water Quality Regulations (Volume 14) may be obtained from the LDEQ Office of Environmental Assessment, Post Office Box 4314, Baton Rouge, Louisiana 70821-4314, (225) 219-3236.

Pursuant to LAC 33:IX.1309.I, LAC 33:IX.6509.A.1 and LAC 33:I.1701, you must pay any outstanding fees to the Department. Therefore, you are encouraged to verify your facility's fee status by contacting LDEQ's Office of Management and Finance, Financial Services Division at (225) 219-3863. Failure to pay in the manner and time prescribed could result in applicable enforcement actions as prescribed in the Environmental Quality Act, including, but not limited to revocation or suspension of the applicable permit, and/or assessment of a civil penalty against you.

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Delhi Municipal Sewage Treatment Plant  
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A Municipal Water Pollution Prevention Environmental Audit Report Form will be furnished upon finalization of the permit. Please consult Part II, Section B of the permit for instructions regarding this audit.

For sanitary treatment plants, the plans and specifications must be approved by the Department of Health and Hospitals, Office of Public Health, P.O. Box 4489, Baton Rouge, Louisiana 70821-4489, (225) 342-7395.

Should you have any questions concerning any part of the DRAFT PERMIT, public notice requirements, or fees, please contact Ms. Rachel Davis, Office of Environmental Services, Water Permits Division, Municipal and General Water Permits Section at the address on the preceding page or telephone (225) 219-3081. Please reference your Agency Interest Number **19813** and your Louisiana Pollutant Discharge Elimination System Number **LA0039802** on all future correspondence to the Department.

Sincerely,



Tom Killeen, Environmental Scientist Manager  
Municipal and General Water Permits Section

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Attachments (Draft Permit Parts I-III, Statement of Basis, and Fee Sheet)

cc: IO-W

Rachel Davis  
Water Permits Division

ec: Ms. Gayle Denino  
Office of Management & Finance

Permit Compliance Unit  
Office of Environmental Compliance

For Public Notice  
Public Participation Group  
Office of Environmental Assistance

Public Health Chief Engineer  
Office of Public Health  
Department of Health and Hospitals

**DRAFT**



PERMIT NUMBER: LA0039802  
AGENCY INTEREST NO.: 19813  
ACTIVITY NO.: PER20090001

OFFICE OF ENVIRONMENTAL SERVICES  
**Water Discharge Permit**

Pursuant to the Clean Water Act, as amended (33 U.S.C. 1251 et seq.), and the Louisiana Environmental Quality Act, as amended (La. R. S. 30:2001 et seq.), rules and regulations effective or promulgated under the authority of said Acts, and in reliance on statements and representations heretofore made in the application, a Louisiana Pollutant Discharge Elimination System permit is issued authorizing

Town of Delhi  
Delhi Municipal Sewage Treatment Plant  
P.O. Box 277  
Delhi, La 71232

**Type Facility:** publicly owned treatment works serving the Town of Delhi

**Location:** 567 J.M. Graves Rd. in Delhi, Richland Parish

**Receiving Waters:** Bayou Macon (Subsegment 081001)

to discharge in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II, and III attached hereto.

This permit shall become effective on

This permit and the authorization to discharge shall expire five (5) years from the effective date of the permit.

Issued on

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Cheryl Sonnier Nolan  
Assistant Secretary

**DRAFT**

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## EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

### FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date lasting through the expiration of the permit the permittee is authorized to discharge from:

Outfall 001, treated sanitary wastewater (**design capacity** is 2.0 MGD).

Such discharges shall be limited and monitored by the permittee as specified below:

<u><b>Effluent Characteristic</b></u>	<u><b>Storet Code</b></u>	<u><b>Discharge Limitations</b></u>				<u><b>Monitoring Requirements</b></u>	
		(lbs/day)	other units (specify)				
		<u>Monthly Avg.</u>	<u>Weekly Avg.</u>	<u>Monthly Avg.</u>	<u>Weekly Avg.</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow-MGD	50050	Report	Report	---	---	Continuous	Recorder <sup>1</sup>
BOD <sub>5</sub>	80082	166.8	---	10 mg/l	15 mg/l	2/week	3 Hr. Composite
TSS	00530	250.2	---	15 mg/l	23 mg/l	2/week	3 Hr. Composite
Fecal Coliform colonies/100ml <sup>2</sup>	74055	---	---	200	400	2/week	Grab
pH (Standard Units) <sup>3</sup>	00400	---	---	---	---	2/week	Grab

### Whole Effluent Toxicity Testing <sup>4</sup>

	<u><b>Storet Code</b></u>	<u><b>Quality (Percent % UNLESS STATED)</b></u>		<u><b>Measurement Frequency</b></u>	<u><b>Sample Type</b></u>
		<u>Monthly Avg. Minimum</u>	<u>7-Day Minimum</u>		
<u><i>Ceriodaphnia dubia</i></u>	TLP3B	Report <sup>5</sup>	Report <sup>5</sup>	1/quarter	24-Hr Composite
	TOP3B	Report	Report	1/quarter	24-Hr Composite
	TPP3B	Report	Report	1/quarter	24-Hr Composite
	TGP3B	Report <sup>5</sup>	Report <sup>5</sup>	1/quarter	24-Hr Composite
	TQP3B	Report	Report	1/quarter	24-Hr Composite
<u><i>Pimephales promelas</i></u>	TLP6C	Report <sup>5</sup>	Report <sup>5</sup>	1/quarter	24-Hr Composite
	TOP6C	Report	Report	1/quarter	24-Hr Composite
	TPP6C	Report	Report	1/quarter	24-Hr Composite
	TGP6C	Report <sup>5</sup>	Report <sup>5</sup>	1/quarter	24-Hr Composite
	TQP6C	Report	Report	1/quarter	24-Hr Composite

If a test failure has occurred and the required retests have been performed, the test results are to be reported on the DMR as follows:

	<u><b>Storet Code</b></u>	<u><b>Monthly Avg. Minimum</b></u>	<u><b>7-Day Minimum</b></u>	<u><b>Measurement Frequency</b></u>	<u><b>Sample Type</b></u>
Biomonitoring <sup>4</sup> Retest #1	22415	Report <sup>5</sup>	Report <sup>5</sup>	As Required <sup>6</sup>	24-Hr Composite
	22418	Report <sup>5</sup>	Report <sup>5</sup>	As Required <sup>6</sup>	24-Hr Composite
Retest #2	22416	Report <sup>5</sup>	Report <sup>5</sup>	As Required <sup>6</sup>	24-Hr Composite
	22419	Report <sup>5</sup>	Report <sup>5</sup>	As Required <sup>6</sup>	24-Hr Composite
Retest #3	51443	Report <sup>5</sup>	Report <sup>5</sup>	As Required <sup>6</sup>	24-Hr Composite
	51444	Report <sup>5</sup>	Report <sup>5</sup>	As Required <sup>6</sup>	24-Hr Composite

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- 1 Includes totalizing meter or totalizer.
- 2 See Part II, Section A, Paragraph 8
- 3 The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units. The permittee shall report on the Discharge Monitoring Reports both the minimum and maximum instantaneous pH values measured.
- 4 See Part II, Whole Effluent Toxicity Testing Requirements
- 5 Species Quality Reporting Units: Pass = 0, Fail = 1
- 6 See Part II, Whole Effluent Toxicity Testing Requirement

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location:

Outfall 001, at the point of discharge from the last treatment unit prior to mixing with other waters.

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## PART II

### OTHER REQUIREMENTS

In addition to the standard conditions required in all permits and listed in Part III, the office has established the following additional requirements in accordance with the Louisiana Water Quality Regulations.

#### SECTION A. GENERAL STATEMENTS

1. The Louisiana Department of Environmental Quality (LDEQ) reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDL's for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as requested by the permittee and/or as necessary to achieve compliance with water quality standards. Therefore, prior to upgrading or expanding this facility, the permittee should contact the Department to determine the status of the work being done to establish future effluent limitations and additional permit conditions.

This permit may be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitations issued or approved under sections 301(b)(2)(C) and (D); 304(b)(2); and 307(a)(2) of the Clean Water Act or more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional water quality studies and/or TMDL's, if the effluent standard, limitations, water quality studies or TMDL's so issued or approved:

- a) Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
  - b) Controls any pollutant not limited in the permit; or
  - c) Requires reassessment due to change in 303(d) status of waterbody; or
  - d) Incorporates the results of any total maximum daily load allocation, which may be approved for the receiving water body.
2. This permit does not in any way authorize the permittee to discharge a pollutant not listed or quantified in the application or limited or monitored for in the permit.
  3. Authorization to discharge pursuant to the conditions of this permit does not relieve the permittee of any liability for damages to state waters or private property. For discharges to private land, this permit does not relieve the permittee from obtaining proper approval from the landowner for appropriate easements and rights of way.
  4. For definitions of monitoring and sampling terminology see Part III, Section F.
  5. 24-hour Oral Reporting: Daily Maximum Limitation Violations

Under the provisions of Part III Section D.6.e.(3) of this permit, violations of daily maximum limitations for the following pollutants shall be reported orally to the Office of Environmental Compliance within 24 hours from the time the permittee became aware of the violation followed by a written report in five days.

Pollutants:       None

6. As an exception to Part III Section D.6.e (1), the permittee shall report all overflows in the collection system with the Discharge Monitoring Report submittal. These reports shall be summarized and reported in tabular format. The summaries shall include: the date, time, duration, location, estimated volume, and cause of the overflow; observed environmental impacts from the overflow; actions taken to address the overflow; and the ultimate discharge location if not contained (e.g., storm sewer system, ditch, tributary). All other overflows and overflows which endanger human health or the environment must be reported in the manner described in Part III, Section D.6 of the permit.

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## OTHER REQUIREMENTS (cont.)

7. The permittee shall achieve compliance with the effluent limitations and monitoring requirements specified for discharges in accordance with the following schedule:

### EFFECTIVE DATE OF THE PERMIT

8. Future water quality studies may indicate potential toxicity from the presence of residual chlorine in the treatment facility's effluent. Therefore, the permittee is hereby advised that a future Total Residual Chlorine Limit may be required if chlorine is used as a method of disinfection. In many cases, this becomes a NO MEASURABLE Total Residual Chlorine Limit. If such a limit were imposed, the permittee would be required to provide for dechlorination of the effluent prior to a discharge.

### 9. DISCHARGE MONITORING REPORTS

Monitoring results must be reported on a Discharge Monitoring Report (DMR) form (EPA No. 3320-1 or an approved substitute). All monitoring reports must be retained for a period of at least three (3) years from the date of the sample measurement. The permittee shall make available to this Department, upon request, copies of all monitoring data required by this permit.

If there is a no discharge event at any of the monitored outfall(s) during the reporting period, enter "No Discharge" in the upper right corner of the Discharge Monitoring Report.

Reporting periods shall end on the last day of the month. Monitoring results for each month shall be summarized on a Discharge Monitoring Report (DMR) Form and submitted to the Office of Environmental Compliance on a monthly basis, postmarked no later than the 15th day of the month following each reporting period. Permittees shall be required to submit DMRs according to the following schedule or as established in the permit:

For parameter(s) with monitoring frequency(ies) of **1/month or more frequent**:

Postmark DMR by the 15th day of the following month.

For parameter(s) with monitoring frequency (ies) of **1/quarter**:

<u>Monitoring Period</u>	<u>DMR Postmark Date</u>
January 1-March 31	April 15 <sup>th</sup>
April 1-June 30	July 15 <sup>th</sup>
July 1- September 30	October 15 <sup>th</sup>
October 1 – December 31	January 15 <sup>th</sup>

For parameter(s) with monitoring frequency (ies) of **semi-annual**:

<u>Monitoring Period</u>	<u>DMR Postmark Date</u>
January 1-June 30	July 15 <sup>th</sup>
July 1- December 31	January 15 <sup>th</sup>

For parameter(s) with monitoring frequency(ies) of **1/year**:

<u>Monitoring Period</u>	<u>DMR Postmark Date</u>
January 1- December 31	January 15 <sup>th</sup>

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**OTHER REQUIREMENTS (cont.)**

Duplicate copies of DMRs (one set of originals and one set of copies) signed and certified as required by LAC 33:IX.2503.B, and all other reports (one set of originals) required by this permit shall be submitted to the Permit Compliance Unit at the following address:

Department of Environmental Quality  
Office of Environmental Compliance  
Enforcement Division  
Post Office Box 4312  
Baton Rouge, Louisiana 70821-4312  
Attention: Permit Compliance Unit

10. The acceptance of hauled domestic septage is prohibited unless otherwise authorized by this Department. Septage is defined in LAC 33:IX.2313 as the liquid and solid material pumped from a septic tank, cesspool, portable toilet, Type III marine sanitation device, any similar domestic sewage treatment system, or a holding tank when the system is cleaned or maintained that receives only domestic sewage.



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## OTHER REQUIREMENTS (cont.)

### SECTION B. MUNICIPAL WATER POLLUTION PREVENTION

#### Pollution Prevention Requirements

1. The permittee shall institute or continue programs directed towards pollution prevention. The permittee shall institute or continue programs to improve the operating efficiency and extend the useful life of the facility. The permittee will complete an annual Environmental Audit Report each year for the life of this permit according to the schedule below. A copy of the Environmental Audit Form has been attached to this permit. Please make additional copies to be utilized for each year of this permit. Additional copies can be obtained upon request.

The audit evaluation period is as follows:

Audit Period Begins	Audit Period Ends	Audit Report Completion Date
Effective Date of Permit	12 Months from Audit Period Beginning Date	3 Months from Audit Period Ending Date

These reports shall discuss the following items:

- a. The influent loading, flow, and design capacity of the facility;
  - b. The effluent quality and plant performance;
  - c. The age of the wastewater treatment facility;
  - d. Bypasses and overflows of the tributary sewerage system and treatment works;
  - e. The ultimate disposition of the sewage sludge;
  - f. Landfilling of sewage sludge and potential alternatives (if applicable);
  - g. New developments at the facility;
  - h. Operator certification and training;
  - i. The financial status of the facility; and
  - j. A subjective evaluation of conditions at the facility.
2. A resolution from the permittee's governing body shall be obtained as part of the Environmental Audit Report. This resolution shall include, at a minimum, the following:
    - a. An acknowledgement that the governing body has reviewed the Environmental Audit Report;
    - b. A description of actions that the permittee will take to maintain compliance with the permit conditions, and if necessary, include a schedule outlining major projects to be accomplished.
  3. The Environmental Audit Report and the governing body's resolution must be signed by a duly authorized representative of the permittee and shall be maintained with the permit and permit related records (i.e. lab data, DMRs), and made available upon request by duly authorized regional inspectors and/or DEQ Headquarters representatives.

**OTHER REQUIREMENTS (cont.)**

**SECTION C. CONTRIBUTING INDUSTRIES AND PRETREATMENT REQUIREMENTS**

1. The following pollutants may not be introduced into the treatment facility:
  - a. Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, wastestreams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21;
  - b. Pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0, unless the works are specifically designed to accommodate such discharges;
  - c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, resulting in Interference;
  - d. Any pollutant, including oxygen demanding pollutants (e.g., BOD5), released in a discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW;
  - e. Heat in amounts which will inhibit biological activity in the POTW resulting in Interference but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds 40 degrees Centigrade (104 degrees Fahrenheit) unless the Approval Authority, upon request of the POTW, approves alternate temperature limits;
  - f. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;
  - g. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems; and
  - h. Any trucked or hauled pollutants, except at discharge points designated by the POTW.
2. The permittee shall require any indirect discharger to the treatment works to comply with the reporting requirements of Sections 204(b), 307, and 308 of the Clean Water Act, including any requirements established under LAC 33.IX.Subpart 2.Chapter 61.
3. The permittee shall provide adequate notice of the following:
  - a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Sections 301 and 306 of the Clean Water Act if it were directly discharging those pollutants; and
  - b. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit.
  - c. Any notice shall include information on (1) the quality and quantity of effluent to be introduced into the treatment works, and (2) any anticipated impact of the change on the quality or quantity of effluent to be discharged from the POTW.

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## OTHER REQUIREMENTS (cont.)

### SECTION D. STORMWATER DISCHARGES

1. This section applies to all stormwater discharges from the facility, either through permitted outfalls or through outfalls which are not listed in the permit or as sheet flow.
2. Any runoff leaving the developed areas of the facility, other than the permitted outfall(s), exceeding 50 mg/L TOC, 15 mg/L Oil and Grease, or having a pH less than 6.0 or greater than 9.0 standard units shall be a violation of this permit. Any discharge in excess of these limitations, which is attributable to offsite contamination, shall not be considered a violation of this permit. A visual inspection of the facility shall be conducted and a report made annually as described in Paragraph 4 below.
3. The permittee shall prepare, implement, and maintain a Storm Water Pollution Prevention Plan (SWP3) within six (6) months of the effective date of the final permit. The terms and conditions of the SWP3 shall be an enforceable Part of the permit. EPA document 833-R-92-002 (Storm Water Management for Industrial Activities) may be used as a guidance and may be obtained by writing to the U.S. Environmental Protection Agency, Office of Water Resources (RC-4100), 401 M Street, S.W., Washington D.C. 20460 or by calling (202) 260-7786.
4. The following conditions are applicable to all facilities and shall be included in the SWP3 for the facility.
  - a. The permittee shall conduct an annual inspection of the facility site to identify areas contributing to the storm water discharge from developed areas of the facility and evaluate whether measures to reduce pollutant loadings identified in the SWP3 are adequate and have been properly implemented in accordance with the terms of the permit or whether additional control measures are needed.
  - b. The permittee shall develop a site map that includes all areas where stormwater may contact potential pollutants or substances that can cause pollution. Any location where reportable quantities leaks or spills have previously occurred are to be documented in the SWP3. The SWP3 shall contain a description of the potential pollutant sources, including, the type and quantity of material present and what action has been taken to assure stormwater precipitation will not directly contact the substances and result in contaminated runoff.
  - c. Where experience indicates a reasonable potential for equipment failure (e.g. a tank overflow or leakage), natural condition of (e.g. precipitation), or other circumstances which result in significant amounts of pollutants reaching surface waters, the SWP3 should include a prediction of the direction, rate of flow and total quantity of pollutants which could be discharged from the facility as a result of each condition or circumstance.
  - d. The permittee shall maintain for a period of three years a record summarizing the results of the inspection and a certification that the facility is in compliance with the SWP3 and the permit, and identifying any incidents of noncompliance. The summary report should contain, at a minimum, the date and time of inspection, name of inspector(s), conditions found, and changes to be made to the SWP3.
  - e. The summary report and the following certification shall be signed in accordance with LAC 33:IX.2503. The summary report is to be attached to the SWP3 and provided to the Department upon request.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are

**OTHER REQUIREMENTS (cont.)**

significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signatory requirements for the certification may be found in Part III, Section D.10 of this permit.

- f. The permittee shall make available to the Department, upon request, a copy of the SWP3 and any supporting documentation.

5. The following shall be included in the SWP3, if applicable.

- a. The permittee shall utilize all reasonable methods to minimize any adverse impact on the drainage system including but not limited to:
- i. maintaining adequate roads and driveway surfaces;
  - ii. removing debris and accumulated solids from the drainage system; and
  - iii. cleaning up immediately any spill by sweeping, absorbent pads, or other appropriate methods.
- b. All spilled product and other spilled wastes shall be immediately cleaned up and disposed of according to all applicable regulations, Spill Prevention and Control (SPC) plans or Spill Prevention Control and Countermeasures (SPCC) plans. Use of detergents, emulsifiers, or dispersants to clean up spilled product is prohibited except where necessary to comply with State or Federal safety regulations (i.e., requirement for non-slippery work surface). In all such cases, initial cleanup shall be done by physical removal and chemical usage shall be minimized.
- c. All equipment, parts, dumpsters, trash bins, petroleum products, chemical solvents, detergents, or other materials exposed to stormwater shall be maintained in a manner which prevents contamination of stormwater by pollutants.
- d. All waste fuel, lubricants, coolants, solvents, or other fluids used in the repair or maintenance of vehicles or equipment shall be recycled or contained for proper disposal. Spills of these materials are to be cleaned up by dry means whenever possible.
- e. All storage tank installations (with a capacity greater than 660 gallons for an individual container, or 1,320 gallons for two or more containers in aggregate within a common storage area) shall be constructed so that a secondary means of containment is provided for the entire contents of the largest tank plus sufficient freeboard to allow for precipitation. Diked areas should be sufficiently impervious to contain spills.
- f. All diked areas surrounding storage tanks or stormwater collection basins shall be free of residual oil or other contaminants so as to prevent the accidental discharge of these materials in the event of flooding, dike failure, or improper draining of the diked area. All drains from diked areas shall be equipped with valves that shall be kept in the closed condition except during periods of supervised discharge.
- g. All check valves, tanks, drains, or other potential sources of pollutant releases shall be inspected and maintained on a regular basis to assure their proper operation and to prevent the discharge of pollutants.
- h. The permittee shall assure compliance with all applicable regulations promulgated under the Louisiana Solid Waste and Resource Recovery Law and the Hazardous Waste Management Law (L.R.S. 30:2151, etc.). Management practices required under above regulations shall be referenced in the SWP3.
- i. The permittee shall amend the SWP3 whenever there is a change in the facility or change in the operation of the facility that materially increases the potential for the ancillary activities to result in a discharge of significant amounts of pollutants.

**OTHER REQUIREMENTS (cont.)**

- j. If the SWP3 proves to be ineffective in achieving the general objectives of preventing the release of significant amounts of pollutants to water of the state, then the specific objectives and requirements of the SWP3 shall be subject to modification to incorporate revised SWP3 requirements.

**6. Facility Specific SWP3 Conditions:**

- a. **Site Map.** The locations of the following areas, where such areas are exposed to precipitation, shall also be included on the site map: grit, screenings and other solids handling, storage or disposal areas; sludge drying beds; dried sludge piles; compost piles; septage and/or hauled waste receiving station; and storage areas for process chemicals, petroleum products, solvents, fertilizers, herbicides and pesticides.
- b. **Employee Training.** At a minimum, must address the following areas when applicable to a facility: petroleum product management; process chemical management; spill prevention and controls; fueling procedures; general good housekeeping practices; proper procedures for using fertilizer, herbicides and pesticides.
- c. **Potential Pollutant Sources.** The summary of potential pollutant sources must also list the activities and pollutants from the following areas: grit, screenings and other solids handling, storage or disposal areas; sludge drying beds; dried sludge piles; compost piles; septage and/or hauled waste receiving station; and access roads/rail lines.
- d. **Description of BMPs to be Used.** In addition to the other BMPs considered, the facility must consider routing storm water into treatment works, or covering exposed materials from the following exposed areas: grit, screenings and other solids handling, storage or disposal areas; sludge drying beds; dried sludge piles; compost piles; septage and/or hauled waste receiving station.
- e. **Inspections:** The following areas must be included in all monthly inspections: access roads/rail lines; grit, screenings and other solids handling, storage or disposal areas; sludge drying beds, dried sludge piles; compost piles; septage and/or hauled waste receiving station areas.
- f. **Wastewater and Washwater Requirements.** If washwaters are handled in another manner other than the treatment works, the disposal method must be described and all pertinent documentation must be attached to the plan.

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## OTHER REQUIREMENTS (cont.)

### SECTION E. WHOLE EFFLUENT TOXICITY TESTING (7-DAY CHRONIC NOEC: FRESHWATER)

#### 1. SCOPE AND METHODOLOGY

*It is unlawful and a violation of this permit for a permittee or the designated agent, to manipulate test samples in any manner, to delay sample shipment, or to terminate or to cause to terminate a toxicity test. Once initiated, all toxicity tests must be completed unless specific authority has been granted by the Louisiana Department of Environmental Quality.*

- a. The permittee shall test the effluent for toxicity in accordance with the provisions in this section.

APPLICABLE TO OUTFALL(S):           **001**

CRITICAL DILUTION:                   **11%**

EFFLUENT DILUTION SERIES:       **5%, 6%, 9%, 11%, and 15%**

COMPOSITE SAMPLE TYPE:           **Defined at PART I**

TEST SPECIES/METHODS:          **40 CFR Part 136**

Ceriodaphnia dubia chronic static renewal survival and reproduction test, Method 1002.0, EPA-821-R-02-013, or the most recent update thereof. This test should be terminated when 60% of the surviving females in the control produce three broods or at the end of eight days, whichever comes first.

Pimephales promelas (Fathead minnow) chronic static renewal 7-day larval survival and growth test, Method 1000.0, EPA-821-R-02-013, or the most recent update thereof. A minimum of five (5) replicates with ten (10) organisms per replicate must be used in the control and in each effluent dilution of this test.

- b. The survival NOEC (No Observed Effect Concentration) is defined as the greatest effluent dilution at and below which lethality that is statistically different from the control (0% effluent) at the 95% confidence level does not occur. The NOEC for growth or reproduction is defined as the greatest effluent dilution at and below which sub-lethality that is statistically different from the control (0% effluent) at the 95% confidence level does not occur.
- c. This permit may be reopened to require whole effluent toxicity limits, chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity.
- d. Lethal test failure is defined as a demonstration of a statistically significant lethal effect at test completion to a test species at or below the critical dilution. Sub-lethal test failure is defined as a demonstration of a statistically significant sub-lethal effect (i.e., growth or reproduction) at test completion to a test species at or below the critical dilution.

#### 2. PERSISTENT LETHAL and/or SUB-LETHAL EFFECTS

The requirements of this section apply only when a toxicity test demonstrates significant lethal and/or sub-lethal effects at or below the critical dilution.

If any valid test demonstrates significant lethal or sub-lethal effects to a test species at or below the critical dilution, the frequency of testing for that species is automatically increased to once per quarter for the term of the permit.

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## OTHER REQUIREMENTS (cont.)

- a. The permittee shall conduct a total of three (3) additional tests for any species that demonstrates statistically significant lethal or sub-lethal toxic effects at the critical dilution or lower effluent dilutions. The additional tests shall be conducted monthly during the next three consecutive months in which a discharge occurs to determine if toxicity is persistent or occurs on a periodic basis. The purpose of this testing is to determine whether toxicity is present at a level and frequency that will provide toxic sample results to use in performing a Toxicity Reduction Evaluation (TRE). If no additional test failures occur during the retest monitoring period, the testing frequency will be once per quarter for the term of the permit or until another test failure occurs. The permittee may substitute one of the additional tests in lieu of one routine toxicity test. A full report shall be prepared for each test required by this section in accordance with procedures outlined in item 4 of this section and submitted with the period discharge monitoring report (DMR) to the permitting authority for review.
- b. IF LETHAL EFFECTS HAVE BEEN DEMONSTRATED: If any of the valid additional tests demonstrates significant lethal effects at or below the critical dilution, the permittee shall initiate Toxicity Reduction Evaluation (TRE) requirements as specified in item 6 of this section. The permittee shall notify the Department of Environmental Quality, Office of Environmental Compliance - Permit Compliance Unit in writing within 5 days of the failure of any retest, and the TRE initiation date will be the test completion date of the first failed retest. A TRE may also be required due to a demonstration of intermittent lethal effects at or below the critical dilution, or for failure to perform the required retests.
- c. IF ONLY SUB-LETHAL EFFECTS HAVE BEEN DEMONSTRATED: If any two of the three valid additional tests demonstrate significant sub-lethal effects at 75% effluent dilution or lower, the permittee shall initiate the Toxicity Reduction Evaluation (TRE) requirements (emphasizing investigations pertaining to sub-lethal toxicity) as specified in Item 6 of this section. The permittee shall notify the Department of Environmental Quality, Office of Environmental Compliance - Permit Compliance Unit in writing within 5 days of the failure of any retest, and the TRE initiation date will be the test completion date of the first failed retest. A TRE concentrating on sub-lethal effects may also be required for failure to perform the required tests.
- d. The provisions of item 2.a are suspended upon submittal of the **TRE Action Plan**.

## 3. REQUIRED TOXICITY TESTING CONDITIONS

### a. Test Acceptance

The permittee shall repeat a test, including the control and all effluent dilutions, if the procedures and quality assurance requirements defined in the test methods or in this permit are not satisfied, including the following additional criteria:

- i. The toxicity test control (0% effluent) must have survival equal to or greater than 80%.
- ii. The mean number of Ceriodaphnia dubia neonates produced per surviving female in the control (0% effluent) must be 15 or more.
- iii. 60% of the surviving control females must produce three broods.
- iv. The mean dry weight of surviving Fathead minnow larvae at the end of the 7 days in the control (0% effluent) must be 0.25 mg per larva or greater.
- v. The percent coefficient of variation between replicates shall be 40% or less in the control (0% effluent) for: the young of surviving females in the Ceriodaphnia dubia reproduction test; the

## OTHER REQUIREMENTS (cont.)

growth and survival endpoints of the Fathead minnow test.

- vi. The percent coefficient of variation between replicates shall be 40% or less in the critical dilution, unless significant lethal or nonlethal effects are exhibited for: the young of surviving females in the Ceriodaphnia dubia reproduction test; the growth and survival endpoints of the Fathead minnow test.

Test failure may not be construed or reported as invalid due to a coefficient of variation value of greater than 40%. A repeat test shall be conducted within the required reporting period of any test determined to be invalid.

### b. Statistical Interpretation

- i. For the Ceriodaphnia dubia survival test, the statistical analyses used to determine if there is a significant difference between the control and the critical dilution shall be Fisher's Exact Test as described in EPA-821-R-02-013, or the most recent update thereof.

If the conditions of Test Acceptability are met in Item 3.a above and the percent survival of the test organism is equal to or greater than 80% in the critical dilution and all lower dilution concentrations, the test shall be considered to be a passing test, and the permittee shall report a survival NOEC of not less than the critical dilution for the DMR reporting requirements found in Item 4 below.

- ii. For the Ceriodaphnia dubia reproduction test and the Fathead minnow larval survival and growth test, the statistical analyses used to determine if there is a significant difference between the control and the critical dilution shall be in accordance with the methods for determining the No Observed Effect Concentration (NOEC) as described in EPA-821-R-02-013, or the most recent update thereof.

### c. Dilution Water

- i. Dilution water used in the toxicity tests will be receiving water collected as close to the point of discharge as possible but unaffected by the discharge. The permittee shall substitute synthetic dilution water of similar pH, hardness and alkalinity to the closest downstream perennial water for;

- A. toxicity tests conducted on effluent discharges to receiving water classified as intermittent streams; and
- B. toxicity tests conducted on effluent discharges where no receiving water is available due to zero flow conditions.

- ii. If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria of item 3.a), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:

- A. a synthetic dilution water control which fulfills the test acceptance requirements of item 3.a was run concurrently with the receiving water control;
- B. the test indicating receiving water toxicity has been carried out to completion (i.e., 7 days);
- C. the permittee includes all test results indicating receiving water toxicity with the full report



**OTHER REQUIREMENTS (cont.)**

and information required by item 4 below; and

- D. the synthetic dilution water shall have a pH, hardness and alkalinity similar to that of the receiving water or closest downstream perennial water not adversely affected by the discharge, provided the magnitude of these parameters will not cause toxicity in the synthetic dilution water.

d. Samples and Composites

- i. The permittee shall collect a minimum of three flow-weighted 24-hour composite samples from the outfall(s) listed at item 1.a above. A 24-hour composite sample consists of a minimum of 4 effluent portions collected at equal time intervals representative of a 24-hour operating day and combined proportional to flow or a sample continuously collected proportional to flow over a 24-hour operating day.
- ii. The permittee shall collect second and third 24-hour composite samples for use during 24-hour renewals of each dilution concentration for each test. The permittee must collect the 24-hour composite samples such that the effluent samples are representative of any periodic episode of chlorination, biocide usage or other potentially toxic substance discharged on an intermittent basis.
- iii. The permittee must collect the 24-hour composite samples so that the maximum holding time for any effluent sample shall not exceed 72 hours. The permittee must have initiated the toxicity test within 36 hours after the collection of the last portion of the first 24-hour composite sample. Samples shall be chilled to 0-6 degrees Centigrade during collection, shipping and/or storage.
- iv. If the flow from the outfall(s) being tested ceases during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions and the sample holding time are waived during that sampling period. However, the permittee must collect an effluent composite sample volume during the period of discharge that is sufficient to complete the required toxicity tests with daily renewal of effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days if the discharge occurs over multiple days. The effluent composite sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report required in item 4 of this section.

**4. REPORTING**

- a. A valid test must be completed and test results must be submitted for each species during each Monitoring Period. The permittee shall prepare a full report of the results of all tests conducted pursuant to this section in accordance with the Report Preparation Section of EPA-821-R-02-013, or the most current publication, for every valid or invalid toxicity test initiated whether carried to completion or not. The permittee shall retain each full report pursuant to the provisions of Part III.C of this permit. For any test which fails, is considered invalid, or which is terminated early for any reason, the full report must be submitted for agency review. The permittee shall submit the first full report to the following address:

Department of Environmental Quality  
Office of Environmental Compliance  
P.O. Box 4312  
Baton Rouge, Louisiana 70821-4312  
Attn: Permit Compliance Unit

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## OTHER REQUIREMENTS (cont.)

In addition, if enforcement authority has been retained by EPA, a copy of the report must also be submitted to the following address:

U.S. Environmental Protection Agency, Region 6  
Water Enforcement Branch, 6 EN-WC  
1445 Ross Ave.  
Dallas, Texas 75202

- b. The permittee shall submit the results of each valid toxicity test on the DMR for that Monitoring Period in accordance with Part III. D.4 and the DMR Monitoring Period schedule contained in Part II of this permit. Submit retest information clearly marked as such on the DMR for the Monitoring Period in which the retest occurred. Only results of valid tests are to be reported on the DMR. The permittee shall submit the Table 1 Summary Sheet with each valid test.
  - i. Pimephales promelas (Fathead Minnow)
    - A. If the No Observed Effect Concentration (NOEC) for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TLP6C.
    - B. Report the NOEC value for survival, Parameter No. TOP6C.
    - C. Report the NOEC value for growth, Parameter No. TPP6C.
    - D. If the No Observed Effect Concentration (NOEC) for growth is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TGP6C.
    - E. Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQP6C.
  - ii. Ceriodaphnia dubia
    - A. If the NOEC for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TLP3B.
    - B. Report the NOEC value for survival, Parameter No. TOP3B.
    - C. Report the NOEC value for reproduction, Parameter No. TPP3B.
    - D. If the No Observed Effect Concentration (NOEC) for reproduction is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TGP3B.
    - E. Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQP3B.
  - iii. The permittee shall report the following results for all VALID toxicity retests on the DMR for that Monitoring Period.
    - A. Retest #1 (STORET 22415): If the first monthly retest following failure of a routine test for either test species results in an NOEC for survival less than the critical dilution, report a "1"; otherwise, report a "0".
    - Retest #1 (STORET 22418): If the first monthly retest following failure of a routine test for either test species results in an NOEC for growth or reproduction that is less than the

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critical dilution, report a "1"; otherwise, report a "0".

- B. Retest #2 (STORET 22416): If the second monthly retest following failure of a routine test for either test species results in an NOEC for survival less than the critical dilution, report a "1"; otherwise, report a "0".

Retest #2 (STORET 22419): If the second monthly retest following failure of a routine test for either test species results in an NOEC for growth or reproduction that is less than the critical dilution, report a "1"; otherwise, report a "0".

- C. Retest #3 (STORET 51443): If the third monthly retest following failure of a routine test for either test species results in an NOEC for survival less than the critical dilution, report a "1"; otherwise, report a "0".

Retest #3 (STORET 51444): If the third monthly retest following failure of a routine test for either test species results in an NOEC for growth or reproduction that is less than the critical dilution, report a "1"; otherwise, report a "0".

If, for any reason, a retest cannot be performed during the Monitoring Period in which the triggering routine test failure is experienced, the permittee shall report it on the following Monitoring Period's DMR, and the comments section of the DMRs shall be annotated to that effect. If retesting is not required during a given Monitoring Period, the permittee shall leave these DMR fields blank.

The permittee shall submit the toxicity testing information contained in Table 1 of this permit with the DMR subsequent to each and every toxicity test Monitoring Period. The DMR and the summary table should be sent to the address indicated in 4.a.

## 5. MONITORING FREQUENCY REDUCTION

- a. Upon successfully passing the first four consecutive quarters of WET testing after permit issuance/reissuance and in the absence of subsequent lethal and/or sub-lethal toxicity for one or both test species at or below the critical dilution, the permittee may apply for a testing frequency reduction. If granted, the monitoring frequency for that test species may be reduced to not less than once per year for the less sensitive species (usually the Fathead minnow) and not less than twice per year for the more sensitive test species (usually the Ceriodaphnia dubia).
- b. CERTIFICATION - The permittee must certify in writing that no test failures have occurred and that all tests meet all test acceptability criteria in item 3.a above. In addition, the permittee must provide a list with each test performed including test initiation date, species, NOECs for lethal and sub-lethal effects, and the maximum coefficient of variation for the controls. Upon review and acceptance of this information the agency will issue a letter of confirmation of the monitoring frequency reduction. A copy of the letter will be forwarded to the agency's Permit Compliance Unit to update the permit reporting requirements.
- c. This monitoring frequency reduction applies only until the expiration date of this permit, at which time the Monitoring Frequency/Monitoring Period for both test species reverts to once per quarter until the permit is re-issued.
- d. LETHAL AND/OR SUB-LETHAL FAILURES - If any test fails the lethal and/or sub-lethal endpoint at any time during the term of this permit, three monthly retests are required and the monitoring frequency for the affected test species shall be increased to once per quarter until the permit is re-issued. Monthly retesting is not required if the permittee is performing a TRE.

**OTHER REQUIREMENTS (cont.)**

**6. TOXICITY REDUCTION EVALUATION (TRE)**

- a. The permittee shall submit a **Toxicity Reduction Evaluation (TRE) Action Plan and Schedule** for conducting a TRE for the following:
  - i. If lethal effects have been demonstrated: within (90) days of confirming lethality in any retest; or
  - ii. If only sub-lethal effects have been demonstrated: within (90) days of confirming sub-lethality at 75% effluent dilution or lower in any two out of three retests.

The **TRE Action Plan** shall specify the approach and methodology to be used in performing the TRE. A Toxicity Reduction Evaluation is an investigation intended to determine those actions necessary to achieve compliance with water quality-based effluent requirements and/or chemical-specific limits by reducing an effluent's toxicity (includes sub-lethal toxicity, if applicable) to an acceptable level. A TRE is defined as a step-wise process which combines toxicity testing and analyses of the physical and chemical characteristics of a toxic effluent to identify the constituents causing effluent lethal and/or sub-lethal toxicity and/or treatment methods which will reduce the effluent toxicity. The **TRE Action Plan** shall lead to the successful elimination of effluent lethal and/or sub-lethal toxicity at the critical dilution and include the following:

- i. **Specific Activities.** The plan shall detail the specific approach the permittee intends to utilize in conducting the TRE. The approach may include toxicity characterizations, identifications and confirmation activities, source evaluation, treatability studies, or alternative approaches. When the permittee conducts Toxicity Characterization Procedures the permittee shall perform multiple characterizations and follow the procedures specified in the documents "**Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures**" (EPA-600/6-91/003) and "**Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I**" (EPA-600/6-91/005), or alternate procedures. When the permittee conducts Toxicity Identification Evaluations and Confirmations, the permittee shall perform multiple identifications and follow the methods specified in the documents "**Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity**" (EPA/600/R-92/080) and "**Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity**" (EPA/600/R-92/081), as appropriate. The documents referenced above may be obtained through the National Technical Information Service (NTIS) by phone at 1-800-553-6847, or by writing:

U.S. Department of Commerce  
National Technical Information Service  
5285 Port Royal Road  
Springfield, VA 22161

- ii. **Sampling Plan** (e.g., locations, methods, holding times, chain of custody, preservation, etc.). The effluent sample volume collected for all tests shall be adequate to perform the toxicity test, toxicity characterization, identification and confirmation procedures, and conduct chemical specific analyses when a probable toxicant has been identified;

Where the permittee has identified or suspects specific pollutant(s) and/or source(s) of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical specific analyses for the identified and/or suspected pollutant(s) and/or source(s) of effluent toxicity. Where lethality was demonstrated within 48 hours of test initiation, each 24-hour composite sample shall be analyzed independently. Otherwise the permittee may substitute a composite sample, comprised

# **OTHER REQUIREMENTS (cont.)**

of equal portions of the individual 24-hour composite samples, for the chemical specific analysis;

- iii. Quality Assurance Plan (e.g., QA/QC implementation, corrective actions, etc.); and
- iv. Project Organization (e.g., project staff, project manager, consulting services, etc.).
- b. The permittee shall initiate the **TRE Action Plan** within thirty (30) days of plan and schedule submittal. The permittee shall assume all risks for failure to achieve the required toxicity reduction.
- c. The permittee shall submit a quarterly **TRE Activities Report**, with the Discharge Monitoring Report in the months of January, April, July, and October, containing information on toxicity reduction evaluation activities including:
  - i. any data and/or substantiating documentation which identify the pollutant(s) and/or source(s) of effluent lethal and/or sub-lethal toxicity;
  - ii. any studies/evaluations and results on the treatability of the facility's effluent lethal and/or sub-lethal toxicity; and
  - iii. any data which identify effluent toxicity control mechanisms that will reduce effluent toxicity to achieve compliance with permit biomonitoring requirements and/or chemical-specific limits.

The **TRE Activities Report** shall be submitted to the following addresses:

Department of Environmental Quality  
 Office of Environmental Compliance  
 P.O. Box 4312  
 Baton Rouge, Louisiana 70821-4312  
 Attn: Permit Compliance Unit

U.S. Environmental Protection Agency, Region 6  
 Water Enforcement Branch  
 1445 Ross Avenue  
 Dallas, Texas 75202

- d. The permittee shall submit a Final Report on Toxicity Reduction Evaluation Activities no later than twenty-eight (28) months from confirming lethality and/or sub-lethality (if applicable) in the retests, which provides information pertaining to the specific control mechanism selected that will, when implemented, result in the permittee achieving compliance with permit biomonitoring requirements and/or chemical-specific limits. The report will also provide a specific corrective action schedule for implementing the selected control mechanism.

A copy of the Final Report on Toxicity Reduction Evaluation Activities shall also be submitted to the above addresses.

- e. Quarterly testing during the TRE is a minimum monitoring requirement. LDEQ recommends that permittees required to perform a TRE not rely on quarterly testing alone to ensure success in the TRE, and that additional screening tests be performed to capture toxic samples for identification of toxicants. At the end of the TRE, LDEQ will consider all information submitted and establish appropriate controls to prevent future toxic discharges, including WET and/or chemical-specific limits per state regulations at LAC 33:IX.2707.D.1.e.

**TABLE 1  
SUMMARY SHEET  
Ceriodaphnia dubia SURVIVAL AND REPRODUCTION TEST**

PERMITTEE: \_\_\_\_\_  
 FACILITY SITE: \_\_\_\_\_ LPDES PERMIT NUMBER: \_\_\_\_\_  
 OUTFALL IDENTIFICATION: \_\_\_\_\_  
 OUTFALL SAMPLE IS FROM \_\_\_\_\_ SINGLE \_\_\_\_\_ MULTIPLE  
 DISCHARGE  
 BIOMONITORING LABORATORY: \_\_\_\_\_  
 DILUTION WATER USED: \_\_\_\_\_ RECEIVING WATER \_\_\_\_\_  
 LAB WATER  
 CRITICAL DILUTION \_\_\_\_\_ % DATE TEST INITIATED \_\_\_\_\_

**1. LOW-FLOW LETHALITY:**

Is the mean survival at 7 days significantly less ( $p=0.05$ ) than the control survival at the low-flow or critical dilution?  
 \_\_\_ Yes \_\_\_ No

**PERCENT SURVIVAL - Ceriodaphnia**

TIME OF READING	PERCENT EFFLUENT					
	0 %	31%	41%	54%	72%	97%
24-HOUR						
48-HOUR						
7-DAY						

**2. LOW-FLOW SUB-LETHALITY:**

Is the mean number of young produced per female at 7 days significantly less ( $p=0.05$ ) than the control's number of young per female for the low-flow or critical dilution? \_\_\_ Yes \_\_\_ No

**NUMBER OF YOUNG PRODUCED PER FEMALE @ 7 DAYS - Ceriodaphnia**

REPLICATE	PERCENT EFFLUENT					
	0 %	31%	41%	54%	72%	97%
A						
B						
C						
D						
E						
F						
G						
H						
I						
J						
Mean No. of young						
CV%*						

\* Coefficient of variation = Standard Deviation \* 100/mean

3. Are the test results to be considered valid?

\_\_\_\_\_ Yes \_\_\_\_\_ No  
 If X no (test invalid) , what reasons for invalidity?

4. Is this a retest of a previous invalid test?

\_\_\_\_\_ Yes \_\_\_\_\_ No  
 Is this a retest of a previous test failure?  
 \_\_\_\_\_ Yes \_\_\_\_\_ No

5. Enter percent effluent corresponding to each NOEC (No Observed Effect Concentration) for Ceriodaphnia:

a. NOEC SURVIVAL	=	_____ % effluent
b. NOEC REPRODUCTION	=	_____ % effluent

**TABLE 1**  
**SUMMARY SHEET**  
**Pimephales promelas ("fathead minnow") SURVIVAL AND GROWTH TEST**

PERMITTEE: \_\_\_\_\_  
 FACILITY SITE: \_\_\_\_\_ LPDES PERMIT NUMBER: \_\_\_\_\_  
 OUTFALL IDENTIFICATION: \_\_\_\_\_  
 OUTFALL SAMPLE IS FROM \_\_\_\_\_ SINGLE \_\_\_\_\_ MULTIPLE  
 DISCHARGE  
 BIOMONITORING LABORATORY: \_\_\_\_\_  
 DILUTION WATER USED: \_\_\_\_\_ RECEIVING WATER \_\_\_\_\_  
 CRITICAL DILUTION \_\_\_\_\_ % DATE TEST INITIATED \_\_\_\_\_

**1. LOW-FLOW LETHALITY:**

Is the mean survival at 7 days significantly less ( $p=0.05$ ) than the control survival at the low-flow or critical dilution? \_\_\_\_  
 Yes \_\_\_\_\_ No \_\_\_\_\_

**PERCENT SURVIVAL - Pimephales**

PERCENT EFFLUENT	% SURVIVAL / REPLICATES				MEAN % SURVIVAL			CV %
	A	B	C	D	24-HR	48-HR	7 DAY	
0%								
31 %								
41 %								
54 %								
72 %								
97 %								

**2. LOW-FLOW SUB-LETHALITY:**

Is the mean dry weight (growth) at 7 days significantly less ( $p=0.05$ ) than the control's dry weight (growth) for the low-flow or critical dilution? \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_

**DATA TABLE FOR GROWTH - Pimephales**

PERCENT EFFLUENT	AVERAGE DRY WEIGHT IN MILLIGRAMS IN REPLICATE CHAMBERS					MEAN DRY WEIGHT	CV%*
	A	B	C	D	E		
0%							
31 %							
41 %							
54 %							
72 %							
97 %							

\* Coefficient of variation – standard deviation x 100/mean



3. Are the test results to be considered valid?

☐ Yes ☐ No

If X no (test invalid) , what reasons for invalidity?

4. Is this a retest of a previous invalid test?

☐ Yes ☐ No

Is this a retest of a previous test failure?

☐ Yes ☐ No

5. Enter percent effluent corresponding to each NOEC (No Observed Effect Concentration) for Pimephales:

a. NOEC SURVIVAL =  % effluent

b. NOEC GROWTH =  % effluent